

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ _____

PCT

CHAPTER II

DEMAND

under Article 31 of the Patent Cooperation Treaty:
The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty.

10/566333

For International Preliminary Examining Authority use only

Identification of IPEA		Date of receipt of DEMAND	
Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION		Applicant's or agent's file reference RL.P53153WO	
International application No. PCT/IB2004/051318	International filing date (day/month/year) 28 July 2004 (28.07.2004)	(Earliest) Priority date (day/month/year) 31 July 2003 (31.07.2003)	
Title of invention INJECTING APPARATUS			
Box No. II APPLICANT(S)			
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) SID TECHNOLOGIES LLC 2033 Trowbridge Drive Newtown Pennsylvania 18940 USA		Telephone No.	
		Facsimile No.	
		Teleprinter No.	
		Applicant's registration No. with the Office	
State (that is, country) of nationality: US		State (that is, country) of residence: US	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) LAVI Gilad c/o 2033 Trowbridge Drive Newtown Pennsylvania 18940 USA			
State (that is, country) of nationality: IL		State (that is, country) of residence: US	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) TSALS Izrail c/o 2033 Trowbridge Drive Newtown Pennsylvania 18940 USA			
State (that is, country) of nationality: US		State (that is, country) of residence: US	
<input type="checkbox"/> Further applicants are indicated on a continuation sheet.			

Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCEThe following person is ☐ agent ☒ common representativeand ☒ has been appointed earlier and represents the applicant(s) also for international preliminary examination.☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.☐ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*LIND, Robert
Marks & Clerk
4220 Nash Court
Oxford Business Park South
Oxford OX4 2RU
United Kingdom

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+44 1865 397900

Facsimile No.

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Teleprinter No.

Agent's registration No. with the Office

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION****Statement concerning amendments:***

1. The applicant wishes the international preliminary examination to start on the basis of:

☒ the international application as originally filedthe description ☒ as originally filed☐ as amended under Article 34the claims ☒ as originally filed☐ as amended under Article 19 (together with any accompanying statement)☐ as amended under Article 34the drawings ☒ as originally filed☐ as amended under Article 342. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of the applicable time limit under Rule 69.1(d).4. ☐ The applicant expressly wishes the international preliminary examination to start earlier than at the expiration of the applicable time limit under Rule 54bis.1(a).

* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: English

☒ which is the language in which the international application was filed.☐ which is the language of a translation furnished for the purposes of international search.☐ which is the language of publication of the international application.☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination.**Box No. V ELECTION OF STATES**

The filing of this demand constitutes the election of all Contracting States which are designated and are bound by Chapter II of the PCT.

Box No. VI CHECK LIST

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- | | | |
|--|---|----------|
| 1. translation of international application | : | sheets |
| 2. amendments under Article 34 | : | sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : | sheets |
| 4. copy (or, where required, translation) of statement under Article 19 | : | sheets |
| 5. letter | : | 1 sheets |
| 6. other (specify) EPO 1037 + observations | : | 3 sheets |

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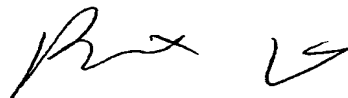
- | received | not received |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

The demand is also accompanied by the item(s) marked below:

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> fee calculation sheet | 5. <input type="checkbox"/> statement explaining lack of signature |
| 2. <input type="checkbox"/> original separate power of attorney | 6. <input type="checkbox"/> sequence listing in computer readable form |
| 3. <input type="checkbox"/> original general power of attorney | 7. <input type="checkbox"/> tables in computer readable form related to a sequence listing |
| 4. <input type="checkbox"/> copy of general power of attorney; reference number, if any: | 8. <input type="checkbox"/> other (specify): |

Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).



Robert LIND
Marks & Clerk
Agent

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1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):

3. ☐ The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.

☐ The applicant has been informed accordingly.

4. ☐ The date of receipt of the demand is WITHIN the time limit of 19 months from the priority date as extended by virtue of Rule 80.5.

5. ☐ Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82.

6. ☐ The date of receipt of the demand is AFTER the expiration of the time limit under Rule 54bis.1(a) and item 7 or 8, below, does not apply.

7. ☐ The date of receipt of the demand is WITHIN the time limit under Rule 54bis.1(a) as extended by virtue of Rule 80.5.

8. ☐ Although the date of receipt of the demand is after the expiration of the time limit under Rule 54bis.1(a), the delay in arrival is EXCUSED pursuant to Rule 82.

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Demand received from IPEA on:

PCT

FEE CALCULATION SHEET

Annex to the Demand

International application No. PCT/IB2004/051318	For International Preliminary Examining Authority use only	
Applicant's or agent's file reference RL.P53153WO	Date stamp of the IPEA	
Applicant SID TECHNOLOGIES LLC		
CALCULATION OF PRESCRIBED FEES		
1. Preliminary examination fee	1.530,00	<div style="border: 1px solid black; width: 20px; height: 15px; display: inline-block; text-align: center; line-height: 15px;">P</div>
2. Handling fee (<i>Applicants from certain States are entitled to a reduction of 75% of the handling fee. Where the applicant is (or all applicants are) so entitled, the amount to be entered at H is 25% of the handling fee.</i>)	129,00	<div style="border: 1px solid black; width: 20px; height: 15px; display: inline-block; text-align: center; line-height: 15px;">H</div>
3. Total of prescribed fees Add the amounts entered at P and H and enter total in the TOTAL box	1.659,00	
		<div style="border: 1px solid black; width: 100px; height: 15px; display: inline-block; text-align: center; line-height: 15px;">TOTAL</div>
MODE OF PAYMENT		
<input type="checkbox"/> authorization to charge deposit account with the IPEA (see below)	<input type="checkbox"/> cash	
<input type="checkbox"/> cheque	<input type="checkbox"/> revenue stamps	
<input type="checkbox"/> postal money order	<input type="checkbox"/> coupons	
<input type="checkbox"/> bank draft	<input checked="" type="checkbox"/> other (<i>specify</i>): Being credited to your account	
AUTHORIZATION TO CHARGE (OR CREDIT) DEPOSIT ACCOUNT <i>(This mode of payment may not be available at all IPEAs)</i>		
<input type="checkbox"/> Authorization to charge the total fees indicated above.	IPEA/ _____	
<input checked="" type="checkbox"/> <i>(This check-box may be marked only if the conditions for deposit accounts of the IPEA so permit)</i> Authorization to charge any deficiency or credit any overpayment in the total fees indicated above.	Deposit Account No.: _____	
	Date: _____	
	Name: _____	
	Signature: _____	

Comments on patentability

These notes address the issues raised in the written opinion of the International Searching Authority regarding the patentability of the claims of this application as filed.

Of the documents cited in the International search report, all but US 2003/0050606 relate to automatic injectors. Most of these documents describe the use of a shield to cover the injection needle before and after use. However, in all of the citations, a first spring is used to drive the injection phase, whilst a second spring is used to bias the cover into a shielding position. These systems are quite different from the present invention which uses a single spring to drive the injection phase and which is released at the end of the injection phase to push the cover to the shielding position. With regard to US 2003/0050606, this does not describe an automatic injector, and describes only the use of a spring to bias a shield into a shielding position, i.e. there is no spring mechanism for driving the injection phase.

The search examiner believes that US2003/0105430 is particularly relevant to the claims of the present application. With reference to Figures 37 to 47 of this document, it is clear that the device described comprises a first spring 20 (or "drive unit") which drives the stopper through the syringe barrel during the injection phase, and a second spring (50) which pushes the needle back into the housing at the end of the injection phase. This is clearly set out in paragraph [192]. It is also noted that whilst the device described with reference to Figures 37 to 47 does not comprise a needle shield that is separate from the housing. Reference is made to a body-sensing unit 302 that is moved into the housing by pushing the unit against the skin. However, at no time does this unit shield the needle. Rather, at the end of the injection phase, release of the drive spring 20 from the stopper allows the second spring to push the needle back inside the housing.

With reference to claim 1 of the present application, this describes an injection device comprising *inter alia* a housing and a shield coupled to the housing. A spring is coupled between the housing and the driver. When the release mechanism releases the spring from the driver, i.e. at the end of the injection phase, that same spring engages the shield and urges the shield outward to cover the needle. This is completely different from the device of US2003/0105430.

The present invention aim to provide an automatic injector with a reduced component count. In particular, it allows the device to be implemented with a single spring, whereas all of the know prior art devices require at least two springs in order to carry out injection and needle shielding.

The further independent claims of the present application all relate to the same inventive concept as claim 1.